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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/537,775	03/29/2000	Minoru Yoshimura	P13998-A	7267

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EXAMINER

TSEGAYE, SABA

ART UNIT	PAPER NUMBER
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2662

DATE MAILED: 08/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/537,775

Applicant(s)

YOSHIMURA, MINORU

Examiner

Saba Tsegaye

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-26 and 28 is/are rejected.
- 7) ☒ Claim(s) 10 and 27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5 and 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Drawings

1. Figures 24 and 25 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claim 10 is objected to because of the following informalities: in line 11, the word "event" is misspelled. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1:

Line 7, the phrase "a plurality of network unit" is confusing.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. Claims 1-4, 12, 15, 16, 19-21 and 28 are rejected under 35 U.S.C. 102(e) as being anticipated by The Admitted Prior Art (Figs 24-26, pages 1-9).

Regarding claims 1-4, the Admitted Prior Art discloses, in Figs 24-26, a switch 104; a control section 110; a selector 105; a photocoupler 102a; an optical line terminal 106 has sections of two systems, 0-system transmission/reception section 101a and 1-system transmission/reception section 101b; ONUs 107-1 to 107-n respectively have sections of two systems 103-1a to 103-na and 103-1b to 103-nb; and subscriber terminals 109-1 to 109-n. Further, The Admitted Prior Art a protection switching method fro a passive optical network system including:

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detecting a communication abnormality in at least one active-system virtual path established between the optical line terminal and the subscriber terminal through the transmission path and the network unit (page 5, lines 5-14); and

upon detection of a communication abnormality in the active-system virtual path, causing the switch to switch the transmission paths to establish a standby-system virtual path between the optical line terminal and the subscriber terminal serving as a communication partner (page 5, line 15-page 6, line 9; and page 7, lines 4-25).

Regarding claims 12, 15, 16, 19-21 and 28, the Admitted Prior Art discloses, in Figs. 25 and 26, an optical line terminal 106 (as in claim 12); a plurality of optical network units 107-1 through 107-n (as in claims 12, 15); selectors 108-1 through 108-n; a switch 104 (as in claim 12); a first control section 110 (as in claims 12, 19, 20); second control sections 111-1 through 111-n (as in claims 12, 21); a plurality of subscribers 109-1 through 109-n (as in claim 12); photocouplers 102a and 102b (as in claim 16); a plurality of active-system virtual paths, optical fibers, 112-1a through 112-na (as in claims 12, 15, 19, 28); and a plurality of standby-system virtual paths, optical fibers, 112-1b through 112-nb (as in claims 12, 15, 19, 28) (pages 2-9).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Admitted Prior Art.

The Admitted Prior Art discloses all the claim limitations as stated above. Further, the Admitted Prior Art discloses that the transmission path is formed from optical fiber. However, the Admitted Prior Art does not expressly disclose the transmission path is formed from a metal line or a coaxial cable. Optical fibers are usually preferred for long transmission distances, exposure to electromagnetic interference, or exposure to conditions of repeated mechanical flexing of the cables. However, the dynamic range provided by conventional optical fiber modulation techniques may not be high enough for analog applications, such as feed links for antenna arrays. Coaxial cables and metal lines provide excellent dynamic range characteristics.

Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to substitute a metal line or a coaxial cable to the optical fiber of the Admitted Prior Art in order to provide an ease of connection to end station.

9. Claims 5-9, 11 and 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over The Admitted Prior Art in view of Anderson et al. (5,838,924).

The Admitted Prior Art discloses all the claim limitations as stated above. Further, the Admitted Prior Art discloses that the 0-system and 1-system are irrelevant to the active and standby systems. The active system is a currently used system, and the standby system is a system that is used upon switching from the active system (as in claim 23). However, the Admitted Prior Art does not expressly disclose the active virtual path and the standby virtual

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path in different bands; and the second active virtual path and the second standby virtual path to share a band assigned to the first active virtual paths.

Anderson teaches that the protection channel bandwidth is not reserved and may be shared by several working connections (column 5, lines 22-34).

It would have been obvious to one ordinary skill in the art at the time of the invention was made to add a method that shares a band between active and standby virtual paths, such as that suggested by Anderson, in the method of the Admitted Prior Art in order to optimize bandwidth conservation.

10. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Admitted Prior Art in view of Eng et al. (5,455,701).

The Admitted Prior Art discloses all the claim limitations as stated above except for the switch outputs in accordance with a header value added to an ATM cell.

Eng teaches a high-speed asynchronous transfer mode packet switching system. Fig. 2 shows an $N \times M$ optical star coupler based cell distribution network and a plurality of receivers 161-16k. A controller tunes the receivers and it is responsive to header information in the incoming ATM cells (column 3, lines 3-35).

It would have been obvious to one ordinary skill in the art at the time of the invention was made to add a system that the switch outputs in accordance with a header value added to an ATM cell, such as that suggested by Eng, to the PON system of the Admitted Prior Art in order to direct each of the ATM cell inputs to a desired cell distribution network output.

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Allowable Subject Matter

11. Claim 27 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Klink (6,580,688) discloses a switching transmission units to an equivalent circuit for the purposes of bi-directional asynchronous cell transfer.

Kuechler (6,078,589) discloses a method and arrangements for the optimal use of switching oriented and transmission oriented resources of multimedia communication networks.

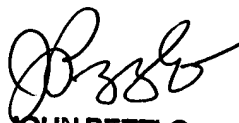
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saba Tsegaye whose telephone number is (703) 308-4754. The examiner can normally be reached on Monday-Friday (7:30-5:00), First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (703) 305-4744. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

ST

August 15, 2003


JOHN PEZZLO
PRIMARY EXAMINER